

REMARKS

Applicant respectfully requests that Examiner acknowledge applicant's claim for domestic priority, under 35 U.S.C. § 119(e), to Provisional Application No. 60/297,491 filed on June 11, 2001, referenced in the updated filing receipt, confirmation No. 7706, mailed on March 4, 2002.

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-29 are pending in this application. Claims 1, 7, 9, 11, 14, and 22 are independent. The remaining claims depend, directly or indirectly, from claims 1, 9, 14, and 22. Claims 1, 2, 7, 9, 10, 11, 14, 15, 22, and 23 have been amended to clarify the present invention recited, and claims 8, 13, 17, and 25 have been canceled without prejudice or disclaimer. No new matter has been added.

Claim Amendments

Claims 1, 7, 9, 11, 14, and 22 have been amended to incorporate the limitation previously recited in claims 8, 13, 17, and 25, *i.e.*, that "the miscible amine comprises triethanol amine."

In addition, claims 1, 7, 9, 11, 14, and 22 have been amended to incorporate the limitation that "the well [treating] fluid is a non-oleaginous liquid and comprises a viscosifying synthetic polymer." Finally, claims 1, 7, 9, 11, 14, and 22 have been amended to incorporate the limitation that "the well [well treating] fluid maintains viscosity when subjected to an elevated temperature." No new matter has been added as support for these amendments may be found, for example, in paragraphs 0010, 0017, 0024, 0026, 0030, 0034, 0036, 0037, and 0039 of the present application.

Rejection(s) under 35 U.S.C § 112

Claims 1-6, 8-10, and 12-29 stand rejected under 35 U.S.C. § 112, first paragraph,

as failing to comply with the written description requirement. Specifically, the Examiner asserts that the specification fails to teach that “the mixing of a well fluid occurs in the absence of a cross-linkant” as recited in the claims. Claims 1, 9, 14, and 22 have been amended in this reply to cancel this limitation from the claims. Thus, this rejection is now moot. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C § 102

U.S. PATENT NO. 3,660,287

Claims 1-7, 9-12, 14-16, 18-24, and 26-29 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 3,660,287 (“Quattrini”). Independent claims 1, 7, 9, 11, 14, and 22 have been amended to incorporate the limitation previously recited in claims 8, 13, 17, and 25, which have been cancelled. To the extent that the rejection applies to amended claims 1, 7, 9, 11, 14, and 22, this rejection is respectfully traversed.

The claimed invention relates to techniques and compositions for increasing the thermal stability of synthetic polymer well (or well treating) fluids by mixing effective amounts of a miscible amine in the well fluids. Amended independent claims 1, 7, 9, 11, 14, and 22 require that a well fluid be a non-oleaginous liquid comprising a viscosifying synthetic polymer and at least an effective amount of a miscible amine comprising triethanol amine. Moreover, claims 1, 7, 9, 11, 14, and 22 have been amended to recite that the well fluid maintains viscosity when subjected to an elevated temperature.

This invention offers the advantages of increasing the thermal stability of the well fluids when exposed to high temperature, high pressure, high shear and low pH (*i.e.*, stress conditions). Thus, providing effective fluid control, which prevents formation damage and potential “blowouts.” *Paragraphs 0018 and 0028.*

Quattrini is directed to an aqueous reactive scale solvent for removing deposits of calcium sulfate from oil well equipment and discloses a solvent comprising a partially neutralized aminopolyacetic acid and a carbonate. *Quattrini, Abstract.* “The composition of this invention comprises basically a partially neutralized aqueous solution of an amino polyacetic acid and a carbonate. The carbonate reacts with the ‘gyp’ scale surface resulting in a lowering of pH at the point of reaction. The calcium ion is released during the reaction and is immediately taken up by the amino polyacetic acid which

serves as a sequestering or chelating agent. Simultaneously with the release of the calcium ion during reaction of the carbonate with the scale, carbon dioxide is also released. The rapid and progressive reaction caused by the carbonate activity removes the ‘gyp’ scale by forming two soluble products of reaction. In the case of calcium sulfate scale, the products are a soluble calcium chelate and a soluble sulfate salt.”

Column 2, lines 18-31.

Quattrini is completely silent as to a non-oleaginous well fluid comprising a viscosifying synthetic polymer and a miscible amine comprising triethanol amine that maintains viscosity when subjected to an elevated temperature. As such, Quattrini does not show or suggest all the limitations in claims 1, 7, 9, 11, 14, and 22 that are required to increase the thermal stability of the well fluid when exposed to high temperature, high pressure, high shear and low pH (*i.e.*, stress conditions).

In view of the above, Quattrini fails to show or suggest the present invention as recited in claims 1, 7, 9, 11, 14, and 22. Thus, claims 1, 7, 9, 11, 14, and 22 are patentable over Quattrini. Dependent claims 2-6, 10, 12, 15, 16, 18-21, 23, 24, and 26-29 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

U.S. PATENT NO. 5,061,386

Claims 1-7, 9-12, 14-16, 18-23, and 26-29 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,061,386 (“Mujis”). Independent claims 1, 7, 9, 11, 14, and 22 have been amended to incorporate the limitation previously recited in claims 8, 13, 17, and 25, which have been cancelled. To the extent that the rejection applies to amended claims 1, 7, 9, 11, 14, and 22, this rejection is respectfully traversed.

Mujis neither explicitly nor inherently discloses the claimed invention. Mujis, which is directed to a surfactant that dissolves faster in an aqueous solution, discloses a surfactant comprising an alkyl amine ethoxylate and a gel breaker. *Mujis, Summary.* Moreover, the invention claimed in Mujis relates to an oleaginous fluid comprising an oil-in-water emulsion (rather than a non-oleaginous well fluid, as recited in the present invention). *Mujis, column 1, lines 57-60.* Furthermore, Mujis fails to disclose or otherwise suggest using triethanol amine to enhance the thermal stability of a well fluid.

Clearly, Mujis fails to disclose or otherwise suggest all limitations required by claims 1, 7, 9, 11, 14, and 22 of the present application.

Specifically, Mujis is completely silent as to a non-oleaginous well fluid comprising a viscosifying synthetic polymer and a miscible amine comprising triethanol amine that maintains viscosity when subjected to an elevated temperature. As such, Mujis does not show or suggest all limitations in claims 1, 7, 9, 11, 14, and 22 that are required to increase the thermal resistivity of the well fluid and enhance the overall stability of the system when exposed to high temperature, high pressure, high shear and low pH (*i.e.*, stress conditions).

In view of the above, Mujis fails to show or suggest the present invention as recited in claims 1, 7, 9, 11, 14, and 22. Thus, claims 1, 7, 9, 11, 14, and 22 are patentable over Mujis. Dependent claims 2-6, 10, 12, 15, 16, 18-21, 23, 24, and 26-29 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply to be fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, do not hesitate to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 05542.009002).

Respectfully submitted,

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